

Abstract

The invention relates to a method for producing dimensionally accurate metal foam from a foamable, powder metallurgically produced metal semifinished product having a melting point $> 200\text{ }^{\circ}\text{C}$ involving: the introduction of material, which is capable of foaming when $T > 200\text{ }^{\circ}\text{C}$, into a mold, which is thermally stable up to the melting point of the foamable material and which has a coefficient of expansion of less than 3 K^{-1} , preferably $< 1\text{ K}^{-1}$; the controlled heating of the foamable material inside the mold while radiators foam said material, whereby these radiators are controlled with regard to energy output and are used on or through the mold, and; the removal of the foam formed thereby from the mold. The invention also relates to a device for producing dimensionally accurate thermally foamed metal foam parts that comprises: a thin-walled mold, which is stable at the melting temperature of the metal foam and which has a coefficient of expansion of $< 3\text{ K}^{-1}$; a controllable irradiating device, and; a controller that controls the irradiating device based on the measurement given by a radiation measuring device.